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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,239	03/24/2004	Ryuji Tomita	8017-1131	4530

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EXAMINER
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PHAM, LONG

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### Rejections and/or objections necessitated by the amendments

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, as presently amended and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miles et al. (US publication 2001/0038138) in combination with Kitada et al. (US publication 2003/0160262).

With respect to present amended claim 1 and claim 2, Miles et al. teach the invention as claimed. **See the 102 rejection of claims 1 and 2 in office action dated 08/04/05.**

Further with respect to presently amended claim 1, Miles et al. fail to teach that the first and second guard rings extending into the substrate.

Kitada et al. forming first and second guard rings that extend into a semiconductor layer or substrate (since no substrate, the semiconductor layer functions as a substrate) to improve breakdown voltage. See figs. 23a and 23b and [0011].

It would have been obvious to one of ordinary skill in the art of making semiconductor devices to incorporate the teaching of Kitada et al. into the device of Miles et al. to obtain the above benefit.

Further with respect to presently amended claim 1, Miles et al. fail to teach that connections between the first and second rings extending into the substrate.

However, the formation of buried connections between buried elements in a substrate is well-known.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 13 as newly added is rejected under 35 U.S.C. 102(b) as being anticipated by Miles et al. (US publication 2001/0038138).

With respect to newly added claim 13, Miles et al. teach the invention as claimed. **See the 102 rejection of claim 1 in office action dated 08/04/05.**

Further with respect to newly added 13, Miles et al. further teach forming a insulating layer or passivation layer 13 and the first and second rings and the connections are formed in the insulating layer. See figs. 2,3, and 4.

Claim 17 as newly added is rejected under 35 U.S.C. 102(b) as being anticipated by Miles et al. (US publication 2001/0038138).

With respect to newly added claim 17, Miles et al. teach the invention as claimed. **See the 102 rejection of claim 1 in office action dated 08/04/05.**

Further with respect to newly added 13, Miles et al. further teach the second guard ring being spaced from the first guard ring and not overlapping the first guard ring when viewed from a direction perpendicular to a surface of the substrate. See figs. 2,3, and 4.

***Allowable Subject Matter***

Claims 3-12, 14-16, and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments with respect to claims 1, 2, 13, and 17 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long Pham whose telephone number is 571-272-1714. The examiner can normally be reached on Mon-Frid, 10am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Long Pham  
Primary Examiner  
Art Unit 2814

LP